

A NEW SPECIES OF EUPHORBIA (SECTION CHAMAESYCE) FROM THE BAHAMAS

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In the recent upsurge of interest in the Bahama Flora, many new plant records have been reported (e.g. Gillis, Howard and Proctor, 1973; Correll, 1974; Hill, 1974), but few, if any, new species have come to light. Instead, as a result of more careful study, many of the old species of Britton and Millspaugh (1920) have been merged into more widespread species of the southeastern United States and the West Indies. In the present case, I wish to record the presence in the Bahamas of a previously undescribed species.

Despite the many collections from the islands to date, there are occasional sites that have not yet been botanized, and which may harbor narrow endemics. The environment of the new species is a rocky limestone coast, windswept and harsh. Under such conditions, a colonizer must quickly adapt in order to survive. This adaptation is reflected in a distinct new morphology and, presumably, also in a new genetic makeup. The plant described has tiny succulent leaves with revolute margins that enable it to survive in its hot, dry, sometimes salty environment. The tough stipules have become elaborated to sheathe the leaf base, and a woolly indument within the sheath further reduces water loss from the tender point of juncture of stem and leaf and protects tender buds. The branches are lax and flexuous, and the plant is rather appressed to the rocks, allowing its survival in the frequent gale winds in these islands. To survive a hurricane a plant must either be very flexible or very strong. Many woody plants in the Bahamas have very strong trunks, but have narrow flexuous branches more likely to twist than to snap.

Despite the apparently recent geological origin of the Bahamas, certain groups of colonizers have diverged sufficiently to be considered new species. The present case is such an example.

EUPHORBIA longinsulicola S. R. Hill, sp. nov., sectionis Chamaesyceis; suffrutex perennis laxis 0.5-1 m altus, caule infime 6-9 mm crasso; rami glabri alterni, vaginis stipularibus persistentibus intra lanatis; laminae foliorum succulentae oppositae obovatae 3-7 mm longae 1.5-2 mm latae glabrae marginibus valde revolutis, apicibus rotundatis vel retusis, basibus breve angustatis; petioli 0.5-1 mm longi; cyathia olivacea obpyramidalia extus glabra 1.2-1.5 mm longa, pedunculis 1.0-1.2 mm longis, intra lanata; glandes 4 deltoideae 0.8-1 mm longae 0.3-0.5 mm latae exappendiculatae; flores

staminati plerumque 8, antheris 2 vel 3; flores pistillati brevi-exserti, glabri, stylis tribus integris; fructus maturi non vidi.

TYPE: BAHAMAS: Long Island, exposed seacoast at the end of the Buckleys Road, Deadman's Cay. Rooted in crevices of rock among wind-stunted shrubs. 1 July, 1974. *Steven R. Hill 2383* (Holotype, NY; Isotypes FTG, US, VT).

ADDITIONAL SPECIMEN EXAMINED: BAHAMAS: Long Island, exposed seacoast at Turtle Cove, between Clarence Town and Deadman's Cay, 31 May, 1972, *Steven R. Hill 832* (FTG, NY). Figure 1.

The new species is a perennial subshrub 0.5-1 meter tall, rather woody with flexuous lax branches. The branches are 6-9 mm thick at the base, alternate, glabrous, with persistent stipular sheaths that are woolly within giving the stem a jointed appearance. The leaves are opposite, obovate, rounded or usually retuse at the tip, 3-7 mm long and 1.5-2 mm wide. The bases of the glabrous and fleshy leaves are shortly attenuate, and the edges of the blade are strongly revolute, the edges being fused to the nerve beneath. The cyathia are solitary on branchlets, glabrous outside, in the axils of the leaves at the branchlet tips, obpyramidal, 1.2-1.5 mm long (measured from peduncle top to rim), olive-green with 4 dark brown (almost black) glands, without appendages; the deltoid glands are 0.8-1 mm wide (measured along the rim). The peduncle is 1.0-1.2 mm long. All cyathia counted had 8 staminate flowers. The pistillate flowers are short exserted, glabrous, and fewer in number than the staminate. The stamens bear two or three anthers. The third anther is, when present, either in reduced, non-functional form or apparently complete and functional. The plant was in full flower in early July, in contrast to the May specimen which was nearly sterile.

Euphorbia longinsulicola was found growing in an area of wind-swept limestone bedrock and stunted sea grape shrubs at a site previously uncollected. In more protected areas nearby the more common *Euphorbia mesembrianthemifolia* Jacq. grew. Field observations suggest that the species is restricted to a narrow strip of land exposed to wind and ocean influence along the coast from Turtle Cove to Deadman's Cay, a distance of about 15 km. The obovate, fleshy leaves and sprawling, shrubby habit seem to separate the taxon easily from the species of *Euphorbia* sect. *Chamaesyce* previously known from the Bahamas. It seems to be most clearly allied to another Bahamian endemic, *Euphorbia vaginulata* Griseb., but the latter species, which I examined in the field while on Inagua, has leaves that are rather brown and cinereous when fresh and which are significantly longer and narrower than those of the new species, and it has stipular sheaths that are prominently ciliate. In addition, *E. vaginulata* seems to prefer open sand or somewhat rocky areas, and has sparse, thin, erect branches. It is also not known to occur on Long Island.

The species epithet indicates that it is an inhabitant of Long Island, the

Bahamas.

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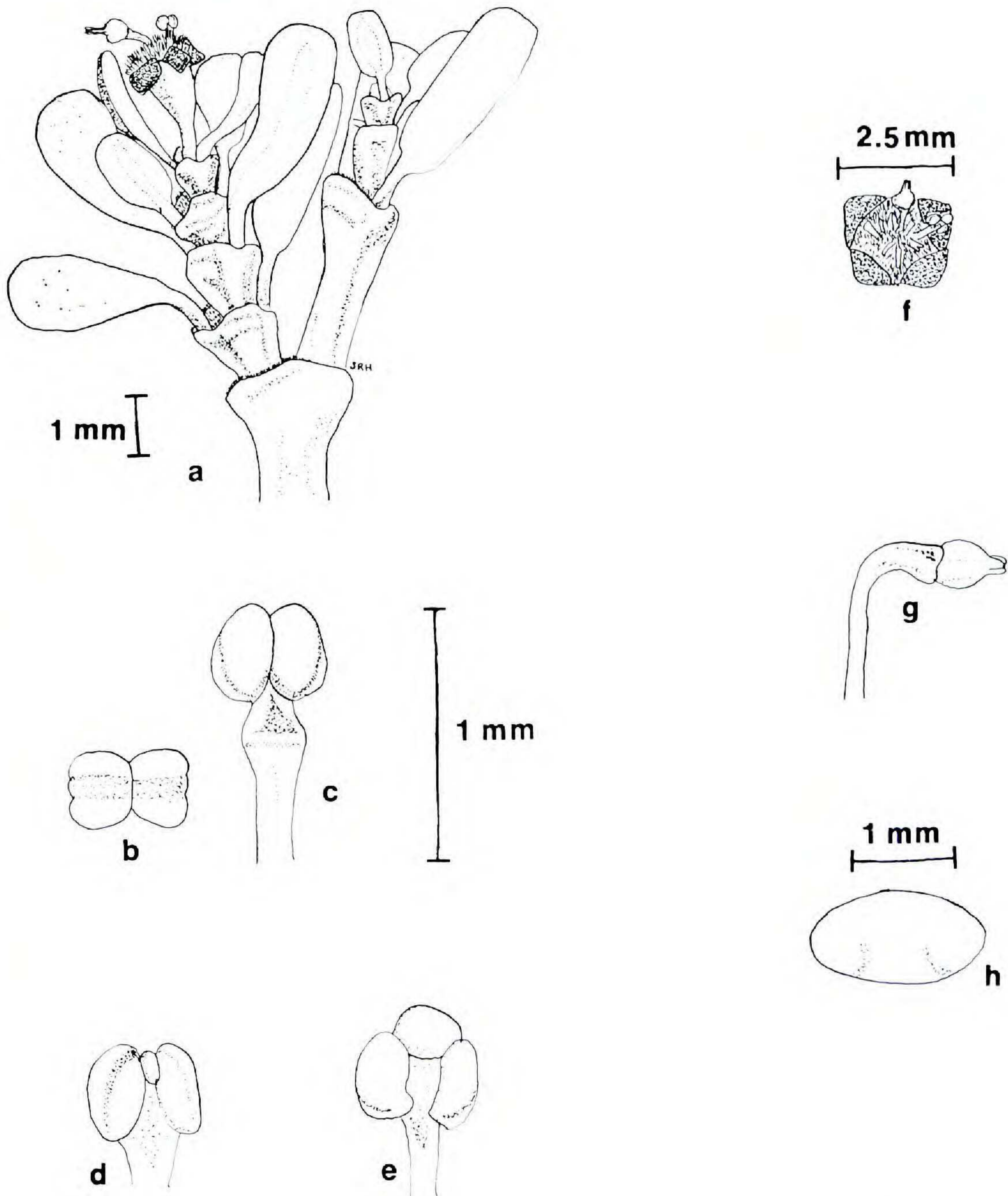


Figure 1. *Euphorbia longinsulicola* S. R. Hill a. stem axis and branchlet with cyathium. b-e portions of staminate flowers: b-c, typical staminate flower, top and lateral view; d, staminate flower with 2 normal and one abortive anther; e, staminate flower with three functional anthers. f, cyathium, top view. g, pistillate flower. h, cross-section of leaf, freehand, showing revolute-fused margin. All drawn from the holotype.

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